



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: David C. Morris Group Art Unit: 3745

Serial No.: 09/328,931 Examiner: C. Verdier

Filed: 06/09/1999 Attorney Docket: MO1.003

Title: HELICOPTER BLADE ASSEMBLY ADAPTED TO PERMIT  
RAPID FORWARD FLIGHT

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DECLARATION UNDER §1.132

I have reviewed the concept presented by Mr. David C. Morris and have concluded  
that for his invention lift is generated in proportion to the speed of rotation and to the  
angle of attack of the virtual disk. It does not depend upon the angle of attack of  
10 individual blades.

During rapid forward flight the blade assembly of the invention  
operates in a fundamentally different manner from that of a  
standard helicopter. The standard helicopter works in such a manner that  
15 each rotating blade cuts through the air with a sufficient  
angle of attack as to provide lift. In the invention, however, (at sufficiently high rates  
of rotation), air flows over a virtual disk created by the rotation of the blade assembly  
to create lift: the individual blades do not have a positive angle of attack

20 In addition, between standard blade performance and the virtual  
lifting disk concept: advancing and retreating blade speeds  
will have no effect on ultimate forward speed as they do  
on the forward speed of standard helicopters.  
Fast forward flight would be a feature of the invention.

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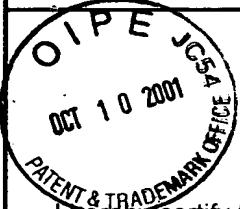
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**CERTIFICATE OF MAILING BY FIRST CLASS MAIL (37 CFR 1.8)**Applicant(s): **David C. Morris**

Docket No.

**MO1.003**Serial No.  
**09/328,931**Filing Date  
**06/09/1999**Examiner  
**C. Verdier**Group Art Unit  
**3745**

Invention:

**HELICOPTER BLADE ASSEMBLY ADAPTED TO PERMIT RAPID FORWARD FLIGHT**I hereby certify that this **Declaration Under 1.132 signed by Daniel P. Schrage**  
(Identify type of correspondence)is being deposited with the United States Postal Service as first class mail in an envelope addressed to: The  
Assistant Commissioner for Patents, Washington, D.C. 20231 on **10/05/2001**  
(Date)**Mari Yamamoto**

(Typed or Printed Name of Person Mailing Correspondence)

A handwritten signature of Mari Yamamoto.

(Signature of Person Mailing Correspondence)

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